IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF: :

TAKAYUKI YAMAMOTO, ET AL.   : EXAMINER: UHLIR, N.J.

SERIAL NO. 10/085,081   :

FILED: MARCH 1, 2002   : GROUP ART UNIT: 1773

FOR: METAL SHEET WITH
     ANTICORROSIVE COATING

SECOND DECLARATION UNDER 37 C.F.R. § 1.132

COMMISSIONER FOR PATENTS
ALEXANDRIA, VA 22313-1450

SIR:

I, Hiroo Shige, a citizen of Japan, hereby declare and state that:

1. I have Master's degree in Engineering, which was conferred upon me in 1993 by the Kyoto Institute of Technology located in Kyoto prefecture, Japan.

2. I have been employed by Kabushiki Kaisha Kobe Seiko Sho since 1993 and I have a total of 10 years of work and research experience in the field of surface processing and corrosion of metal sheet.

3. The following experiments were carried out by me or under my direct supervision and control.

4. Samples having the following characteristics were prepared;

Base metal : Cold rolled steel sheet

Pretreatment : phosphating 0.8 g/m^2

Anticorrosive paint on pretreated base metal :

Amount of zinc powder in dry paint : 65 mass%

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Metal salt rust inhibitor in dry paint : Magnesium phosphate

Amount of metal salt rust inhibitor in dry paint : 6 mass %

5. The samples were subjected to the CCT-JASO corrosion test (90 cycles).

6. The attached FIG. D shows the maximum corrosion depth in the samples after the cycles as a function of the average particle size of the metal salt rust inhibitor.

7. FIG. D shows that when the average particle diameter of the metal salt rust inhibitor was about 1.36 μ m the maximum corrosion depth was about 0.13 mm (and varied from about 0.08 mm to about 0.28 mm). In contrast, when the average particle diameter of the metal salt rust inhibitor was about 0.49 μ m the maximum corrosion depth was about 0.10 mm (and varied from about 0.05 mm to about 0.13 mm).

8. FIG. D shows that when the average particle diameter of the metal salt rust inhibitor was about 0.49 μ m the maximum corrosion depth was only about 77% (= (0.10/0.13) * (100)) the maximum corrosion depth when the average particle diameter of the metal salt rust inhibitor was about 1.36 μ m.

9. FIG. D shows that when the average particle diameter of the metal salt rust inhibitor was about 0.49 μ m the variation in the maximum corrosion depth was only about 40% (= [(0.13 - 0.05) / (0.28 − 0.08)] * (100)) the variation in the maximum corrosion depth when the average particle diameter of the metal salt rust inhibitor was about 1.36 μ m.

10. In my opinion, the reduction in maximum corrosion depth, and in variation in maximum corrosion depth, that is achieved by the present invention by reducing the average particle diameter of the metal salt rust inhibitor to 1 μ m or less is significant and of practical importance.

11. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the

like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

12. Further declarant saith not.

Date:___July 27, 2004___   ___Hiroo Shige___

Hiroo SHIGE

Attachments: Fig. D